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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/788,863

02/27/2004

Joseph H. Sassine

169.12-0600

7195

164 7590 07/11/2007
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EXAMINER

WATKO, JULIE ANNE

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

07/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/788,863

Applicant(s)

SASSINE ET AL.

Examiner

Julie Anne Watko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-16,18-20 and 26-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-16,18-20 and 26-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/27/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 9, 2007, has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3, 5-11, 13-16, 18-20, 29 and 31-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Aoyagi et al (US Pat. No. 6222704 B1).

As recited in claim 1, Aoyagi et al show a head suspension assembly, comprising: a beam component (right part of 23 in Fig. 4) having a front (right) end and a rear (left) end; a hinge component (portion 27 of 23) near the rear (left) end of the beam component for connecting to an actuation arm; and a gimbal component 24B near the front end of the main beam section for carrying a transducing head 25; wherein the hinge component (portion 27 of 23) comprises a first structural damping material (see col. 3, lines 23-25, "stainless steel") and the gimbal component 24B comprises a second structural damping material (see col. 3, lines 23-25, "stainless steel").

As recited in claims 1-2 and 9-10, Aoyagi et al are silent regarding stainless steel having a modulus of elasticity greater than approximately 10 gigapascals, 30 gigapascals, and 50 gigapascals.

The Examiner asserts that stainless steel inherently has a modulus of elasticity greater than approximately 10 gigapascals (See, e.g., Nakamura et al, US Pat. No. 6212043 B1, Table 1).

Even if the modulus of elasticity were not a property inherent to stainless steel, it would have been obvious for a person of ordinary skill in the art to explore known options by trying the stainless steel known in the art to have a modulus of elasticity greater than approximately 10 gigapascals. No teaching, suggestion, nor motivation is required to establish a *prima facie* case of obviousness. KSR v. Teleflex, 550 U.S. (2007).

As recited in claim 3, Aoyagi et al show that the first structural damping material (see col. 3, lines 23-25, “stainless steel”) and the second structural damping material (see col. 3, lines 23-25, “stainless steel”) are substantially identical in composition.

As recited in claim 5, Aoyagi et al show that the hinge component (27 of 23) applies a preload (see col. 2, line 22, “load”) on the transducing head through the beam component (right part of 23 in Fig. 4).

As recited in claim 6, Aoyagi et al show that the entire hinge component (27 of 23) is substantially made from the first structural damping material (see col. 3, lines 23-25, “stainless steel”) only.

As recited in claim 7, Aoyagi et al show that the entire gimbal component 24B is substantially made from the second structural damping material (see col. 3, lines 23-25, “stainless steel”) only.

As recited in claim 8, Aoyagi et al show that the hinge component (27 of 23) has no external structural damping material attached thereto.

As recited in claim 11, Aoyagi et al show that the first structural damping material (see col. 3, lines 23-25, “stainless steel”) is (inherently) an alloy.

As recited in claim 13, Aoyagi et al show that at least one of the hinge component and the gimbal component 24B is separately made and attached to the beam component (right part of 23). (The product by process limitations in these claims are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re*

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Marosi et al, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process limitations or steps, which must be determined in a “product by process” claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.)

As recited in claims 14-15, Aoyagi et al are silent regarding whether the at least one of the hinge or gimbal component is attached to the beam component by adhesive or by welding.

Official notice is taken of the fact that it was known in the art at the time the invention was made to adhere or to weld suspension components.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adhere or weld the suspension components of Aoyagi et al as is notoriously well known in the art. The rationale is as follows: one of ordinary skill in the art would have been motivated to explore known options by trying adhesives and welding to join the parts of Aoyagi et al as is notoriously well known in the art. No teaching, suggestion nor motivation is required to establish a *prima facie* case of obviousness. *KSR v. Teleflex*, 550 U.S. (2007).

As recited in claim 16, Aoyagi et al show a head suspension assembly (see Fig. 4, for example), comprising a beam component (right side of 23 in Fig. 4), a hinge component (27 of 23), wherein the hinge component consists essentially of a first structural damping material (stainless steel), and a gimbal component 24B near the front end of the beam component (right part of 23) for connecting to a slider assembly 25 carrying a transducer (see col. 3, line 36, “slider 25 including the read/write head”).

As recited in claim 16, Aoyagi et al are silent regarding whether the hinge component is separately made and attached to the rear end of the beam component.

The product by process limitations in these claims are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process limitations or steps, which must be determined in a “product by process” claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear. In this case, the product of Aoyagi et al could have been formed by the recited process.

However, even if the product of Aoyagi et al could not have been formed by the recited process, there is no invention in integration or separation of parts, when the integration or separation would have been within the level of ordinary skill in the art. See *In re Fridolph*, 135 USPQ 319 (CCPA 1962). See also *Nerwin v. Erlichman*, 168 USPQ 177 (BPAI 1969).

Furthermore, using one-piece construction or joining separately formed parts is a matter of obvious design choice. See *In re Larson*, 144 USPQ 347 (CCPA 1965).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to separately form and join the hinge and beam. The rationale is as follows: one of ordinary skill in the art would have been motivated to explore known options and to engage in

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routine design choice. No teaching, suggestion nor motivation is required to establish a *prima facie* case of obviousness. KSR v. Teleflex, 550 U.S. (2007).

Regarding the limitation “for connecting to an actuation arm”: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding the limitation “having a modulus of elasticity greater than approximately 10 gigapascals”: See teachings above for claims 1-2 and 9-10.

Regarding claim 18: See teachings above for claim 11.

Regarding claim 19: See teachings above for claims 1-2 and 9-10.

Regarding claim 20: See teachings above for claim 3.

As recited in claims 29 and 32, Aoyagi et al show that the second structural damping material (see col. 3, lines 23-25, “stainless steel”) is (inherently) an alloy.

As recited in claim 31, Aoyagi et al show that the second structural damping material (of which 24B is made) is a composite (see especially 34).

6. Claims 12, 26-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyagi et al (US Pat. No. 6222704 B1) as applied to claims 1-3, 5-11, 13-16, 18-20, 29 and 31-32 above, and further in view of Nakamura et al (US Pat. No. 6212043 B1).

As recited in claims 12, 27 and 30, Aoyagi et al are silent regarding whether the first structural damping material is a laminate comprising a stainless steel layer and a damping material layer.

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As recited in claims 12, 27 and 30, Nakamura et al show that the first structural damping material is a laminate comprising a stainless steel layer and a damping material layer (see col. 5, lines 23-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a laminate as the first structural damping material of Aoyagi et al as taught by Nakamura et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to provide more superior damping effect as taught by Nakamura et al (see col. 5, lines 23-28).

As recited in claims 26 and 28, Aoyagi et al are silent regarding whether the first structural damping material is a composite.

As recited in claim 26, Nakamura et al show structural damping composite (see Table 1).

See teachings, rationale and motivation above for claims 12, 27 and 30.

Response to Arguments

7. Applicant's arguments with respect to claims 1-3, 5-16, 18-20 and 26-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hiller et al (US Pat. No. 6985333 B1) show a stainless steel flexure (see col. 5, lines 6-13), and a stainless steel valve (see col. 21, lines 49-52) having a modulus of elasticity of about 200 GPa (see col. 5, lines 6-13).

Steelnext.com Glossary defines Alloy Steel and Chromium.

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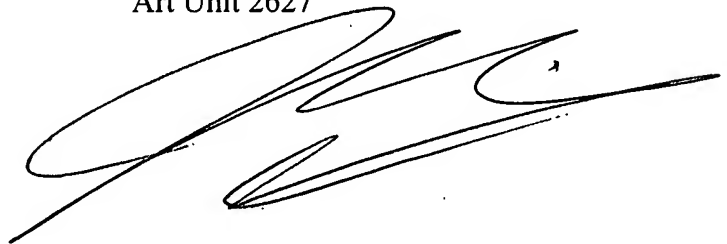
9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (571) 272-7597. The examiner can normally be reached on Mon & Fri, 9:30AM to 7:30PM, Tues-Thurs after 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Julie Anne Watko
Primary Examiner
Art Unit 2627

June 25, 2007
JAW

A handwritten signature in black ink, appearing to be 'JAW', is written over the printed name and title of the examiner.